## ABSTRACT

Methods and apparatus for providing an Anti-Flooding Flow-Control (AFFC) mechanism suitable for use in defending against flooding network Denial-of-Service (N-DoS) attacks is described. Features of the AFFC mechanism include (1) traffic baseline generation, (2) dynamic buffer management, (3) packet scheduling, and (4) optional early traffic regulation. Baseline statistics on the flow rates for flows of data corresponding to different classes of packets are generated. When a router senses congestion, it activates the AFFC mechanism of the present invention. Traffic flows are classified. Elastic traffic is examined to determine if it is responsive to flow control signals. Flows of non-responsive elastic traffic is dropped. The remaining flows are compared to corresponding class baseline flow rates. Flows exceeding the baseline flow rates are subject to forced flow rate reductions, e.g., dropping of packets.